

Attorney's Docket No. K&A 23-0458
Client's Docket No. 15486

APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **MICHAEL JOHNSON**, a citizen of
UNITED STATES OF AMERICA, have invented a new and useful
VALVE OVERRIDE SYSTEM of which the following is a
specification:

VALVE OVERRIDE SYSTEM

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BACKGROUND OF THE INVENTION

Field of the Invention

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The present invention relates to valve wrenches and more particularly pertains to a new valve override system for allowing a user to restore flow through a gate valve that has failed in the closed position.

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Description of the Prior Art

The use of valve wrenches is known in the prior art. U.S. Patent No. 5,320,003 describes a device for actuating underground valves to open or close the underground valves. Another type of valve wrench is U.S. Patent No. 6,244,138 having a device for assisting in the open and closing of a valve and absorbs the shock from opening and closing the valve. U.S. Patent No. 3,583,416 has a stem assembly that can be selectively removed when the valve stem has failed and is easily replaced with a new valve stem assembly.

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While these devices fulfill their respective, particular objectives and requirements, the need remains for a system that has certain improved features that allows a user to open a gate valve that is stuck in a closed position.

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SUMMARY OF THE INVENTION

5 The present invention meets the needs presented above by providing an engagement means that engages the gate of the gate valve assembly and urges the gate into the open position when the valve stem has failed and can no longer be used to operate the gate of the gate valve assembly.

10 Still yet another object of the present invention is to provide a new valve override system that allows a user to quickly restore flow through a failed gate valve to allow users to continue use of the fluid flowing through the gate valve.

15 Even still another object of the present invention is to provide a new valve override system that reduces the amount of time that a system is down due to a failure in a gate valve.

20 To this end, the present invention generally comprises an engagement means being designed for engaging a gate of the gate valve assembly whereby the engagement means is for urging the gate of the gate valve assembly into an open position to allow fluid to pass through the gate valve assembly.

25 There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that
30 will be described hereinafter and which will form the subject matter of the claims appended hereto.

The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

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BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is
10 given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

Figure 1 is a front view of a new valve override system according to the present invention.

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Figure 2 is a cross-sectional view of the present invention taken along line 2-2 of Figure 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

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With reference now to the drawings, and in particular to Figures 1 and 2 thereof, a new valve override system embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

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As best illustrated in Figures 1 and 2, the valve override system 10 generally comprises an engagement means 12 being designed for engaging a gate 2 of the gate valve assembly 1 whereby the engagement means 12 is for urging the gate 2 of the
30 gate valve assembly 1 into an open position to allow fluid to pass through the gate valve assembly 1.

The engagement means 12 comprises a rigid elongate 2 member 14. The rigid elongate 2 member 14 is designed for extending through a casing 3 of the gate valve assembly 1 whereby the rigid elongate 2 member 14 engages a bottom edge of the gate 2
5 of the gate valve assembly 1.

The rigid elongate 2 member 14 having threads. The threads of the rigid elongate 2 member 14 are designed for threadably engaging the casing 3 of the gate valve assembly 1. The rigid
10 elongate 2 member 14 is designed for being rotated with respect to the casing 3 of the gate valve assembly 1 for changing the length of the rigid elongate 2 member 14 positioned in the gate valve assembly 1 to actuate the gate 2 of the gate valve assembly 1. The rigid elongate 2 member 14 may comprise a 1/4 inch threaded bolt
15 having a length of about 2-1/2 inches.

An inhibiting member 16, such as a packing nut, is designed for selectively engaging the casing 3 of the gate valve assembly 1. The inhibiting member 16 is designed for inhibiting environmental
20 communication between an interior space of the gate valve assembly 1 and an external environment.

The inhibiting member 16 is operationally coupled to the rigid elongate 2 member 14. The inhibiting member 16 is designed for
25 abutting the casing 3 of the gate valve assembly 1 to inhibit environmental communication through the casing 3 adjacent the rigid elongate 2 member 14.

The inhibiting member 16 is threaded. The threads of the
30 inhibiting member 16 threadably engage the rigid elongate 2

member 14 whereby the inhibiting member 16 engages the casing 3 of the gate valve assembly 1 to preload the rigid elongate 2 member 14 and inhibit the rigid elongate 2 member 14 from inadvertently separating from the gate valve assembly 1.

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In use, the user drills a hole through the casing 3 of the gate valve assembly 1 opposite a valve stem of the gate valve assembly 1. The hole drilled into the casing 3 of the gate valve assembly 1 is tapped to provide the hole with threads. The inhibiting member 16 is threaded onto the rigid elongate 2 member 14. The rigid elongate 2 member 14 is threaded into the hole drilled into the casing 3 of the gate valve. The rigid elongate 2 member 14 is rotated with respect to the gate valve assembly 1 to advance the rigid elongate 2 member 14 into the gate valve assembly 1 and urge the gate 2 into the open position. The inhibiting member 16 is tightened against the casing 3 of the gate valve assembly 1 to inhibit environmental communication between the interior space of the gate valve assembly 1 and the environment and inhibiting inadvertent rotation of the rigid elongate 2 member 14 with respect to the gate valve assembly 1.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

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Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable
5 modifications and equivalents may be resorted to, falling within the scope of the invention.